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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,812	02/18/2005	Horst Schulz	ZAHFRI P723US	1653
20210	7590	11/08/2005		
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			EXAMINER MILLS, DANIEL J	
			ART UNIT 3679	PAPER NUMBER

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/524,812

Applicant(s)

SCHULZ ET AL.

Examiner

Daniel J. Mills

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because reference numerals must be in parentheses. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 1 is objected to because of the following informalities: "in axial" line 3 should be changed to --in an axial--; "in joint" lines 5 and 6 should be changed to --in a joint--. ✓ Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what "the same as" in lines 2 and 6 means.

Regarding claim 9, it is unclear what "with to" in lines 11-12 means.

Regarding claims 5-12, the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-6, 8-10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hallberg (US 1,687,019).

Regarding claim 5, Hallberg discloses a shaft-hub connection between a shaft segment (14), which has one central toothed segment (15), the same as adjacent centering segments (16, C), and a stepped hole (12 and 13) in a hub (11), a shaft and a hub being jointed in an axial direction and, to produce a positive fit, a counter profile (12) is cut in the hub by the toothed segment (15), a front centering segment (16) in a joint direction has a diameter (d1) and the toothed segment (B), the same as a rear centering segment (C) lying in a joint direction, has a diameter (d2) larger than the diameter (d1) of the front centering segment (A), the hole has only two adjacent segments (12 and 13) with different diameters (D1, D2), that the diameter (d1) in the front centering segment (16) with a diameter (D1), the same as the diameter (d2) in the rear centering segment (C) with a diameter (D2), forms a respective joint fit and the diameter (d2) in the central toothed segment (B) with the diameter (D1) forms the positive fit.

Regarding claim 6, Hallberg discloses a shaft-hub connection wherein between the central toothed segment (15) and the front centering segment (16) one other

Art Unit: 3679

segment (D) is located which has a diameter (d3) smaller than the diameter (d1) of the front centering segment (16).

Regarding claim 8, Hallberg discloses a shaft-hub connection wherein the centering segment (16) changes over to a shaft collar (at C) which abuts on a front face (at Z) of the hub.

Regarding claim 9, Hallberg discloses a shaft-hub connection between a shaft segment (14) and a hub (11), the shaft segment having one central toothed segment (15) and adjacent centering segments (16 and C), the hub having a stepped hole (12 and 13), the shaft segment and hub being jointed in an axial direction and to produce a positive fit a counter profile is cut in the hub (12) by the central toothed segment (15), a front centering segment (16) in a joint direction has a first diameter (d1), the central toothed segment and the rear centering segment (C) lying in the joint direction have a second diameter (d2), the second diameter (d2) is larger than the first diameter (d1), the stepped hole has a third segment (12 and 13) with a third diameter (D1) and a fourth segment (at Z which accommodates the non-toothed portion C of the shaft) with a fourth diameter (D2), the first diameter (d1) is approximately equal to the third diameter (D1), the second diameter (d2) is approximately equal with to fourth diameter (D2), the front centering segment (16) of the shaft segment and the third segment of the stepped hole forming a joint fit, the rear centering segment (C) of the shaft segment (2) and the fourth segment of the stepped hole forming another joint fit, the rear centering segment (C) of the shaft segment and the third segment of the stepped hole forming a positive fit.

Art Unit: 3679

Regarding claim 10, Hallberg discloses a shaft-hub connection wherein one additional segment (D) is located between the front centering segment (16) and central toothed segment (15) and has a third diameter (d3) smaller than the first diameter (d1).

Regarding claim 12, Hallberg discloses a shaft-hub connection wherein the rear centering segment (C) changes into a shaft collar (at C) which abuts on a front face (at Z) of the hub (3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallberg.

Regarding claim 7, Hallberg discloses a shaft-hub connection wherein the toothed segment (B) has one toothing (5) with a root diameter (dF) and that the diameter (d3) is \leq the root diameter (dF). Hallberg fails to disclose that the teeth are formed by a knurling process, However it would have been a simple matter of engineering design choice at the time of applicant's invention, to use a knurling process to form teeth for the purpose of reducing cost. Accordingly, it would have been ~~obvious~~ ^{obvious to one of ordinary skill in the art} at the time of applicant's invention to modify the arrangement of Hallberg to include knurled teeth.

DPS
DPS

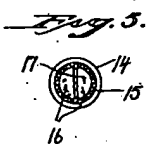
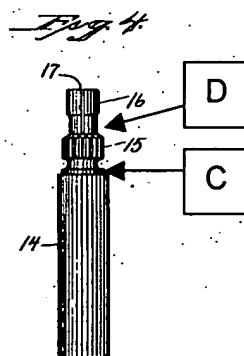
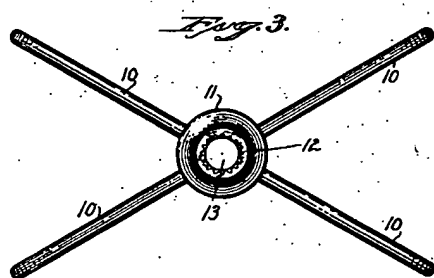
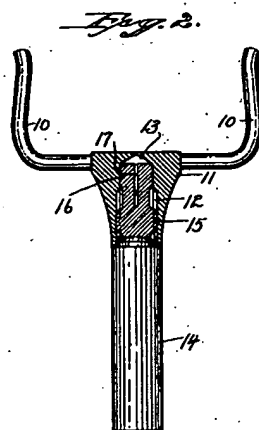
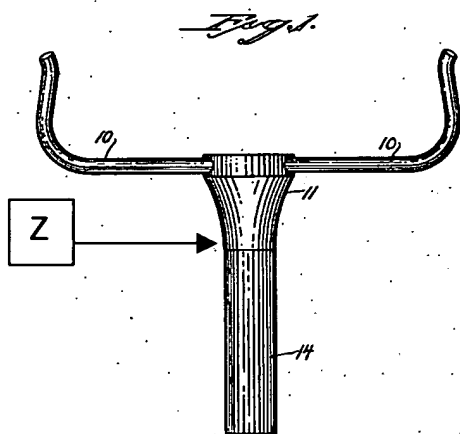
obvious to one
^

Regarding claim 11, Hallberg discloses a shaft-hub connection wherein the central toothed segment (15) has one toothing with a root diameter (d_F), the third diameter (d_3) is less than or approximately equal to the root diameter (d_F). Hallberg fails to disclose that the teeth are formed by a knurling process, However it would have been a simple matter of engineering design choice at the time of applicant's invention, to use a knurling process to form teeth for the purpose of reducing cost. Accordingly, it would have been obvious at the time of applicant's invention to modify the arrangement of Hallberg to include knurled teeth.

Oct. 9, 1928.

A. W. HALLBERG
LAVATORY FIXTURE
Filed July 8, 1925

1,687,019



Inventor
August W. Hallberg
by Seymour F. Earle
att'y

Art Unit: 3679

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farrell et al. (US 4,881,842), Shea (US 4,255,839), Sully (US 4,189,248), Gehrke (GB 2,184,201), Hunt (US 6,557,947), Schwarzler (US 5,536,098), Perrow (US 6,390,925), are cited for pertaining to shaft to hub connections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Mills whose telephone number is 571-272-8115. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJM

DJM

10/27/2005



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